



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,070	03/10/2004	Tien-Fu Huang	FP10062	2665
7590	08/14/2006		EXAMINER	
Leong C. Lei PMB#1008 1867 Ygnacio Valley Road Walnut Creek, CA 94598			RIVELL, JOHN A	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,070

Applicant(s)

HUANG, TIEN-FU

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/10/04 (application).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3753

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. Note the format of the claims in the more patent(s) cited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons in view of Fell.

Terms such as top, bottom, left and right are relative terms. In analyzing the claim language preference is given to the respective spatial relation to the other elements of the claim. So long as those recited elements are located in the proper location relative to that claimed, they are deemed to be in equivalent locations.

The patent Lyons discloses a "sequential valve comprising a body (enclosing the components), valve sliding block (8), cylinder A (3a) and cylinder B (3b), piston B (2b), piston A (2a) and a guiding cover (1), characterized in that the center portion of the body is provided with a vertical valve chamber to accommodate the valve sliding block

(8), and the valve chamber passes through the cylinder A (3a) and the cylinder B (3b), and the top edge of the valve chamber is stepped (e.g. recessed) for the holding of the guiding cover (1); the top portion of the valve sliding block 98) is a recessed air chamber (10a, 10b) and the bottom portion of the valve sliding block (8) is (received in a slot of the piston rod) and within the interior of the valve chamber of the body; and the guiding cover (1) is a flat plate provided with an air inlet hole (5), valve opening A (6a), discharging opening (7a, 7b) and valve opening B (6b), and is mounted onto the stepped position on the top face of the body and the bottom flat face (of valve block 8) is closely contact with the top flat face of the valve sliding block (1) as recited in claim 1.

Thus the patent to Lyons discloses all the claimed features with the exception of having an "engaging slot" on the bottom (opposite to the valving surface) enclosed about the piston rod.

The patent to Fell discloses that it is known in the art to employ an "engaging slot" between ears d, d' of fig. 2 enclosed about the piston rod CC for the purpose of attaching the reciprocal valve element to the actuating piston rod.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Lyons an "engaging slot" on the valve receiving the piston rod, in place of the slot of the piston rod receiving the valve plate as in Lyons, for the purpose of attaching the piston rod and valve for simultaneous movement as recognized by Fell. This modification is seen as nothing more than a physical relocation of the "slot" of Lyons and is a full mechanical equivalent.

Regarding claim 2, as clearly suggested by Fell, the device of the combination will employ "with two recessed neck rim(s) for the engagement of the valve sliding block" as recited.

Regarding claim 4, in Lyons, "the cylinder A (3a) is radially provided with a through air path A (from pilot port 4a) and the cylinder B (3b) is radially provided with a through air path B (from pilot port 4b)" as recited.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons in view of Fell as applied to claims 1, 2, and 4 above, further in view of Peters.

The patent to Lyons, as modified by Fell, discloses all the claimed features with the exception of having differing piston diameters at pistons 3a, 3b.

The patent to Peters discloses that it is known in the art to employ a fluid pressure actuated sequential valve in which opposing pistons at upper piston 50 of upper fluid pressure motor 20 and lower piston at seal 84 fed by inlet 83 have different size diameters for the purpose of reciprocally moving the valve element to its operative positions with different fluid pressures supplied to opposite sides of the valve element.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Lyons, as modified by Fell, piston elements of different size diameter on opposing sides of the valve element for the purpose of reciprocally driving the valve element to its operative positions by using fluid pressures of difference values as recognized by Peters.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Rivell
Primary Examiner
Art Unit 3753

j.r.